

BASIS FOR THE AMENDMENT

Claims 2, 3, 21, 22, 24, 26, 28, 29, 31, 32, and 33 have been canceled.

Claims 1, 25 and 32 have been amended as supported by Claims 2, 3 and 26 as originally filed and at page 11, lines 20-23 of the specification.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 4, 5, 23, 25, 27, 30-32, 34 will now be active in this application.

REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a polycarbonate resin composition, comprising:

a polycarbonate resin;

150 to 350 ppm of a releasing agent; and

20 to 100 ppm of a phosphorous antioxidant;

said polycarbonate resin having a viscosity average molecular weight of from 10,000 to 17,000, an iron content of 0.2 ppm or less, a free total phenol content of 80 ppm or less, and an acetone soluble content of 12% by mass or less.

In contrast, Sakoda, Otsubo and Okamoto fail to disclose or suggest a polycarbonate resin composition as claimed having 150 to 350 ppm of a releasing agent; 20 to 100 ppm of a phosphorous antioxidant; and an acetone soluble content of 12% by mass or less.

The present specification describes that it is necessary that the releasing agent in the pellets is from 100 to 500 ppm (preferably from 150 to 350 ppm) when the releasing agent is less than 100 ppm, occurrence of defects due to flash caused by releasing failure is increased, whereas when it exceeds 500 ppm, defects of polarization and white turbidity as an optical disk are liable to be occur, and thus both cases are not preferred (see, page 12, lines 7 to 14 and Comparative Examples I-2 and I-3, of the present specification). It is necessary that the polycarbonate resin has, in the state of pellets, a viscosity average molecular weight of from 10,000 to 17,000, an iron content of 0.2 ppm or less, and a free total phenol content of 80 ppm or less. When the residual iron content and the free total phenol content are too large, defects due to flash frequently occur. It is preferred that the acetone soluble content is 12% by mass or less from the standpoint of prevention of occurrence of defects due to flash.

When the viscosity average molecular weight is less than 10,000, the mechanical strength of the molded article is lowered, whereas when it exceeds 17,000, distortion remains in the molded article due to shortage of flowability upon molding, so as to lower the optical characteristics, and therefore both the cases are not preferred (see, page 14, lines 8 to 22 and Comparative Example I-1, of the present specification).

Sakoda, Otsubo et al. and Okamoto are silent about “an acetone soluble content of 12% by mass or less” of the present invention.

Further, Sakoda, Otsubo et al. and Okamoto neither disclose nor suggest “A polycarbonate resin composition comprising a polycarbonate resin having (i) a viscosity average molecular weight (10,000 to 17,000), (ii) an iron content (0.2 ppm or less), (iii) a free total phenol content (80 ppm or less) and (iv) an acetone soluble content (12% by mass or less), (v) a releasing agent (150 to 350 ppm) and (vi) a phosphorous antioxidant (20 to 100 ppm)” of the present invention.

Namely, Sakoda, Otsubo et al. and Okamoto neither disclose nor suggest the above indispensable constitutional elements (i) to (vi) of the present invention.

According to the above indispensable constitutional elements (i) to (vi), it is made possible to obtain a polycarbonate resin for an optical disk substrate which is capable of suppressing the defects-occurrence of polarization and white turbidity, and is remarkably less in defects derived from the flash, without increasing the addition of a releasing agent (see, page 12, lines 7 to 14, Examples I-1 and I-2, Comparative Example I-1 to I-3, of the present specification and column 4, line 65 to column 5, line 1, of Sakoda).

Sakoda (U.S. 5,215,799) describes that granulates are washed with a poor solvent such as acetone, while heated, to remove impurities or foreign substances such as low-molecular weight components unreacted components, metallic components and so on. If necessary, the raw material may contain additives, such as an antioxidant, e.g., phosphorous

derivatives (see, column 3, lines 32 to 36 and lines 43 to 44, of Sakoda). In the optical disk substrate produced as above, any metals belonging to the IA group and the VIII group and remaining in the substrate, should be present in an amount of not more than 1 ppm, individually and respectively (see, column 4, lines 30 to 34 and Table 1, of Sakoda). In addition, it is preferable to add 0.002 to 0.5 weight percent (20 to 5000 wt. ppm) of fatty acid monoglyceride having 14 to 30 to polycarbonate resin (see, column 4, line 65 to column 5, line 1, of Sakoda).

Otsubo et al (U.S. 4,880,896) describes that this polycarbonate has a low molecular weight polymer content of not more than 3% by weight, an unreacted bisphenol content of not more than 20 ppm and can be obtained by extracting impurity-containing powderly polycarbonate with an organic solvent such as acetone (see, ABSTRACT, of Otsubo et al).

Okamoto (U.S. 5,783,653) describes that as the antioxidant, phosphorous-containing antioxidants are preferable example of the lubricant (the mold release agent) include stearic acid monoglyceride (see, column 6, lines 23 to 24 and lines 46 to 47, of Okamoto) tris (2,4-di-tert-butylphenyl) phosphite (50 wt. ppm) was used as an antioxidant and stearic acid monoglyceride (100 wt ppm) was used as a mold release agent (see, column 9, lines 23 to 25 and TABLE 1, of Okamoto).

Even a combination of Sakoda, Otsubo et al and Okamoto does not result in the present invention. Specifically, Sakoda, Otsubo et al and Okamoto neither disclose nor suggest the above remarkable effects of the present invention.

Therefore, the rejections of the claims under 35 U.S.C. § 103(a) over Sakoda, Otsubo et al and Okamoto are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

Regarding the List of Related cases, they have been submitted to comply with the duty of disclosure requirement. Each List shows the present application as the first case and the cases related thereto thereafter. Related pending applications are not listed on Forms PTO 1449, as they are not printed on the front of the patent. Applicants resubmit herewith the Lists of Related Cases and request the Examiner to consider the related co-pending applications.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

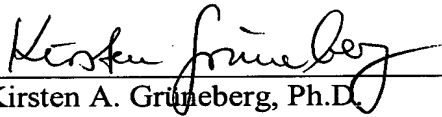
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